

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 13, 2013

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Rick Diericx, Senior Director-Operations Environmental Compliance
Dynergy Midwest Generation
604 Pierce Blvd.
O'Fallon, Illinois 62269

Re: Request for Action Plan regarding Dynergy Midwest Generation LLC's – Baldwin Energy Complex

Dear Mr. Diericx,

On May 24 and 25, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Dynergy Midwest Generation LLC's – Baldwin Energy Complex facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled CCRs. We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at the Dynergy Midwest Generation LLC's – Baldwin Energy Complex facility and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report.

The final report for the Dynergy Midwest Generation LLC's – Baldwin Energy Complex facility can be accessed at the secured link below. The secured link will expire in 60 days.

Here is the link: <http://www.yousendit.com/download/UVJqV282V3J0d0dVQU1UQw>

This report includes a specific condition rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at the Dynergy Midwest Generation LLC's – Baldwin Energy Complex facility. These recommendations are listed in Enclosure 1.

Since these recommendations relate to actions which could affect the structural stability of the CCR management unit(s) and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please provide a rationale. Please provide a response to this request by **April 15, 2013**. Please send your response to:

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Mr. Stephen Hoffman
U.S. Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

If you are using overnight or hand delivery mail, please use the following address:

Mr. Stephen Hoffman
U.S. Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-5838
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov, dufficy.craig@epa.gov, kelly.patrickm@epa.gov and englander.jana@epa.gov.

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as “confidential” you must so advise EPA when you submit your response.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

Please be advised that providing false, fictitious, or fraudulent statements of representation may subject you to criminal penalties under 18 U.S.C. § 1001.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued efforts to ensure protection of human health and the environment.

Sincerely,
/Suzanne Rudzinski/, Director
Office of Resource Conservation and Recovery

Enclosure

Enclosure 1
**Dynergy Midwest Generation LLC's – Baldwin Energy Complex Recommendations
(from the final assessment report)**

CONCLUSIONS

In general, the PFAP impoundment was found to have the following deficiencies:

1. Thick vegetation and trees along the upstream and downstream slopes;
2. Minor potholes and rutting along the crest gravel access road;
3. Damaged discharge pipe from the northern decant;
4. The absence of erosion protection on the embankment near the discharge location of the northern decant has allowed erosion of the embankment;
5. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard and decant capacity at the design storm event;
6. The stability analysis completed does not account for storm event loading conditions; and,
7. No stability analysis was provided for the Intermediate Embankment.

In general, the SFAP impoundment was found to have the following deficiencies:

1. Thick vegetation and trees along the upstream and downstream slopes;
2. Minor potholes and rutting along the crest gravel access road;
3. Scarp present on the downstream slope of the northern embankment;
4. The stability analysis for the SFAP is incomplete for portions of the embankments and does not indicate that the embankments meet generally accepted levels of stability for the sections analyzed; and
5. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard and decant capacity at the design storm event.

In general, the Secondary Pond impoundment was found to have the following deficiencies:

1. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard, decant and overflow spillway capacity; and,
2. No seepage and/or stability analysis has been performed for the Secondary Dike.

In general, the Intermediate Pond impoundment was found to have the following deficiencies:

1. Thick vegetation and trees along the upstream and downstream slopes;
2. Potholes along the crest gravel access road;
3. Concrete covering the downstream slope prohibits monitoring of potential erosion;
4. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard and decant/overflow spillway capacity;
5. In GZA's opinion, the stability analysis for the impoundment was incomplete; and, *Additional analysis was completed and provided to GZA after issuance of the DRAFT report that satisfies our recommendation. No further analysis is recommended at this time.*
6. No evaluation has been conducted to verify the stability of the overflow section against piping or fines erosion.

In general, the Final Pond impoundment was found to have the following deficiencies:

1. Thick vegetation and trees along the downstream slopes;
2. Minor potholes along the crest gravel access road;
3. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard and decant/overflow spillway capacity;
4. In GZA's opinion, the stability analysis for the impoundment was incomplete; and, *Additional analysis was completed and provided to GZA after issuance of the DRAFT report that satisfies our recommendation. No further analysis is recommended at this time.*

5. No evaluation has been conducted to verify the stability of the overflow section against piping or fines erosion.

RECOMMENDATIONS

The following recommendations and remedial measures generally describe the recommended approach to address current deficiencies at the impoundments. Prior to undertaking recommended maintenance, repairs, or remedial measures, the applicability of permits needs to be determined for activities that may occur under the jurisdiction of the appropriate regulatory agencies.

GZA recommends that BEC/Dynegy conduct the following studies and analysis:

1. Conduct an analysis of the hydraulic/hydrologic condition of the impoundments to establish the rise in water level that occurs during the 100-year, 24-hour rain event to confirm that adequate freeboard is maintained and adequate decant and spillway capacity is available. The loading conditions established during the design storm event should be used in the evaluation of the seepage and stability evaluation of the embankments.
2. Address the deficiencies noted in Section 2.6 and Section 3.1 for the stability and seepage analysis previously conducted for the impoundments and establish a complete seepage and stability analysis for each impoundment.
3. Evaluate the potential for piping and fines erosion along the overflow sections of the Ash Pond Dike and the Settling Pond Dike.
4. Moist soil conditions were observed along the downstream slope and/or toe of the southern embankment of the SFAP. This condition may indicate the presence of seepage in that area and should be evaluated. We recommend removing all trees on the downstream slope and toe area and evaluation of the moist soil conditions.
5. Develop an Emergency Action Plan.

Recurrent Operation & Maintenance Recommendations

GZA recommends the following operation and maintenance level activities:

1. Increased mowing of the grasses on the embankments to facilitate assessments and reduce the risk of burrowing animals;
2. Repair the potholes present in the gravel crest access roads. Grade the road to provide better drainage and reduce future potholing; and,
3. Clear trees and other deep rooted vegetation from the slopes and crests of the embankments.

Repair Recommendations

GZA recommends the following repairs to address observed deficiencies that may affect the stability of the embankments. The recommendations may require design by a professional engineer and construction contractor experienced in impoundment construction.

1. Repair the discharge pipe and the embankment erosion near the discharge pipe from PFAP's northern decant. Protect the embankment with riprap or other erosion control features.
2. Remove the concrete located on the downstream slope of the Ash Pond Dike. Repair any erosion observed beneath the concrete and replace with fill engineered to provide a stable embankment that is not susceptible to erosion or piping.
3. Pending the results of the hydraulic/hydrologic analysis, modify the design or operation of the impoundments to provide adequate capacity.
4. Pending the results of the complete seepage and stability analysis for each impoundment, modify the design or operation of the impoundments to provide conditions that result in embankments that meet the generally accepted factors of safety.